

AI.  
generating a tone which may be heard at one or more of the local or remote telephones, muting the microphone of the local telephone, and recording the date and time of the remote party's addition of a secondary telephone destination.

---

### III. REMARKS

#### A. Amendments:

Independent Claim 1 has been amended for purposes of clarity in identifying those steps that are deemed to be novel. No new matter has been added.

Dependent claims 2 through 5 have been amended to delete the reference to "monitoring," since "monitoring" is not a stated limitation in parent Claim 1.

Dependent claim 13 has been amended for clarity in referencing antecedent language in parent Claim 1.

#### B. Claims 1-16 – Obviousness Type Double Patenting:

Claims 1-16 have been rejected on the basis of obviousness type double patenting.

(Office Action, ¶ 1, pp. 2-3.) While applicant believes that the rejection is improper,<sup>1</sup> applicant is willing to file a terminal disclaimer obviating that issue.

---

<sup>1</sup> Among other deficiencies the Office Action asserts that certain claims in the present application "read on" claims in applicant's previously issued patent. (Office Action, ¶ 1, p. 3.) Applicant disputes this contention insofar as it suggests that the claims in this application and that in the issued patent are identical to one another. Among other things, applicant also disputes the purported teachings of the Pennypacker reference as set forth in more detail herein.

C. Claims 1, 2, 4, 6-9, 15 and 16 are not Obvious under 35 U.S.C. Sec. 103:

Claims 1, 2, 4, 6-9, 15 and 16 have been rejected under 35 U.S.C. Sec. 103(a) as unpatentable over U.S. Patent No. 5,504,801 (McNair) in view of U.S. Patent No. 5,777,558 ("Pennypacker"). (Office Action ¶ 3, pp. 3-6.)

Applicant acknowledges, with appreciation, the Examiner's efforts in providing a lengthy and detailed Office Action citing portions of the prior art, which purport to support the various assertions in the Office Action. Notwithstanding its thorough referencing of the basis for the rejection, however, the Office Action ignores certain fundamental elements of the claimed invention. The Office Action is fatally flawed for this reason, among others.

Several things are apparent from, but not mentioned in, the Office Action. First, it is apparent that none of the prior art references is asserted to anticipate the subject matter of the present invention as defined in Claims 1-16. Second, McNair is central to all of the Office Action rejections. While the Office Action tacitly concedes that McNair is not an anticipating reference, the Action fails to note significant differences between McNair and the claimed invention.

McNair is described as a system for detecting a specific form of telephone caller abuse. Specifically, the background of the McNair patent references the problem of unauthorized toll calls being made through a PBX with the cost of the call being billed to the corporate PBX account. Historically, telephone tariffs have assigned legal responsibility for the telephone charges associated with such calls to the corporate PBX account (as opposed to the long distance carrier) -- notwithstanding the fraudulent nature of the calls. Examples of corporations with

monthly charges of six and seven figures for fraudulent long distance telephone calls have been reported in The Wall Street journal and other publications. PBX's with remote access authorization were the hardest hit by these types of fraudulent calls. The calls were made from "off-site" to a corporate PBX using a corporate account code or authorization card. A significant number of the fraudulent calls were made internationally, and certain destination countries were more often involved than others. It was this type of PBX "fraud" that was targeted by McNair. (McNair, Col. 1, lines 10-30.)

The McNair patent attempts to stop this kind of PBX fraud by screening incoming calls from off-site to a PBX that seek to initiate a toll call charged to the PBX account. To do so, McNair teaches a multistep process, the first part of which is to determine whether the incoming call involved a multiple-leg (e.g., remote access) call and the second part of which is to determine (from call pattern information characteristic of a particular subscriber e.g., call duration, history of international calls, etc.) whether the call is likely to be a fraudulent call. (See, e.g., Col. 2, lines 3-20.) It is the first part of this process, which the Office Action apparently asserts is similar to applicant's claimed invention.

In determining whether the call being attempted is from a "multiple-leg (e.g., remote access)" source, the McNair method works as follows:

Multiple-leg calls (including calls placed through two or more PBXs) are distinguished from single leg calls, in accordance with the present invention, using quasi-time domain reflectometry techniques. Echo data are collected for the telephone call from a predetermined point in the network to a point where the call originated. As described below, the data are processed to generate an indication of whether the

telephone call comprises multiple legs, thus identifying those calls most susceptible to unauthorized use.

(Col. 3, lines 41-50; emphasis added.)

More specifically, McNair describes the first part of this process, i.e., detection of an incoming, multiple-leg call to a PBX, as follows:

During the setup of a typical call switched through international gateway switch 202, echo canceller 212 will send a probe signal through the network to determine the echo characteristics of the network. . . . Echo data generated by the probe signal also is provided to fraud detection hardware 214 for processing in accordance with the invention. (Col. 4, line 62 to Col. 5, line 3; emphasis added.)

\*

\*

\*

Fraud detection hardware 214 operates as follows. CPU 402 instructs digital signal processor 404 to probe the telephone channel for echo data. Echo samples from the channel are routed by CPU 402 from I/O device 400 to shared memory 409. CPU 402 next instructs digital signal processor 404 to compute the echo delays (alternatively CPU 402 receives an indication from digital signal processor 404 of the number of echo peaks detected). CPU 402 then compares the echo delay computed by digital signal processor 404 with delay data (retrieved from the lookup table 406) for calls placed from the caller's ANI. The computed (actual echo delay will be the delay associated with the call path to telephone station 204. If the call is multiple-leg call placed through a PBX, the ANI used to retrieve echo delay data from lookup table 406 will be that of the PBX rather than that of the telephone station 204. If the computed delay and the delay from the lookup table 406 differ by more than a predetermined amount that corresponds to an acceptable margin of error, indicating that the call originated from somewhere other than the ANI used in lookup table 406, CPU 402 outputs an alerting signal to fraud management center 216.

(Col. 6, line 7 et seq.; emphasis added.) If an alerting signal is sent, then the McNair process "looks" at other information idiosyncratic to the subscriber in an attempt to determine whether the call is a fraudulent one.

There are a number of significant differences between the McNair method and that of the claimed invention – some of which are neither acknowledged nor referenced in the Office Action.<sup>2</sup>

Using Claim 1, as an example, the McNair patent does not disclose any of the following claimed features, among others:

1. McNair does not disclose a “method for detecting whether a remote party, using a remote telephone to which a telephone connection between itself and a local telephone has been established, has forwarded a call from the local telephone to a secondary telephone destination”:

Indeed, McNair does not even address this possibility.

McNair deals with detecting whether an incoming call to a PBC is coming from some place other than that associated with the purported ANI. McNair does not “disclose a method for detecting whether a remote telephone to which a telecommunication has been directed by a local telephone has been forwarded to a secondary destination.” The assertion that McNair contains such a teaching is misplaced. (See, Office Action ¶ 3, p. 3, which cites McNair Col. 2, lines 62-67.) The cited portion of McNair only indicates that an offsite customer uses a “1-800” number to access the PBX, which is then used to initiate a “second call.” Anyone who has ever used such a system, knows that the subscriber first accesses the PBC through the “1-800” number, then provides an access code (when prompted) and finally dials the telephone number of the party the subscriber wishes to call (after the access code has been authenticated). This is not the same as call-forwarding, in which a telephone is programmed to automatically “forward” all incoming calls to another specific phone number.

---

<sup>2</sup> In a proper analysis under 35 U.S.C. Sec. 103, the scope of the prior art is determined and the differences between the prior art and the claimed subject matter are then ascertained. (Graham v. John Deere Co., 383 U.S. 1 (1996).)

Moreover, even if the sequence referred to in McNair were deemed somehow to be call “forwarding,” the system of McNair does not seek to determine whether this “forwarding” has occurred. Applicant’s system is designed to detect whether a called telephone has been automatically forwarded and to take appropriate action, if it has. In contrast, all calls (both those appropriately authorized and those that are fraudulent) in the PBX systems of McNair are “forwarded” in the sense apparently perceived in the Office Action. The McNair system simply doesn’t care about this type of activity.

Thus, a critical deficiency of McNair is that it does not attempt to determine whether a called telephone has been forwarded. McNair is only concerned about whether an incoming call originates from the place that it purports to originate from based on the perceived ANI of the calling party. This is not a call-forwarding situation.

2. McNair does not disclose “identifying an echo characteristic for said telephone connection after the connection has been established.”

McNair does not “disclose . . . identifying an echo characteristic to the telephone connection, and monitoring the echo characteristic for a significant change in the characteristic consistent with multiple legs to the telephone call” as asserted in the Office Action. (Office Action ¶ 3, p. 3.) McNair simply does not look for whether or not the attempted call has been forwarded by the destination phone. Moreover, claim 1 does not require “monitoring” of the echo characteristic of such a call. “Monitoring” is irrelevant to the patentability of the claims at issue in this rejection.<sup>3</sup>

---

<sup>3</sup> In reviewing the claims, applicant noted that some of the dependent claims improperly refer to “monitoring” which is not recited in parent Claim 1. Claims 2 through 5 have been amended accordingly. “Monitoring” is an additional feature set forth in dependent Claims 13 and 14.

3. McNair does not teach “comparing the identified echo characteristic with at least one stored value for said echo characteristic from previous connection between said local telephone and said remote telephone to determine whether there is a significant difference between the identified echo characteristic and the stored echo characteristic indication that the telecommunication to the remote telephone has been forwarded.”

McNair does not disclose this step and would not accomplish this result, as indicated below. Again, McNair only addresses the detection of non-forwarded incoming telephone calls. It does not address calls to a destination telephone that have been forwarded to another telephone destination.

In addition, McNair does not compare an echo characteristic identified for the current call to a stored echo characteristic from previous connection between said local telephone and said remote telephone. Instead, McNair uses historical data in the “lookup table” for historical information between the “predetermined point in the network” and the perceived ANI of the phone or PBX. This distinction is noted in the Office Action (Office Action ¶ 3, p. 3)<sup>4</sup> and is extremely significant in the operation of the claimed invention as compared to the method of McNair.

Among other things, applicant’s device is much more accurate in determining the existence of call-forwarding at a destination telephone than McNair is in determining the possible existence of a fraudulent incoming attempt to access a PBX telephone system. The present invention utilizes, as the baseline, at least one stored value for said echo characteristic “from previous connection

---

<sup>4</sup> The Office Action specifically acknowledges that:

McNair does not specifically teach the feature of comparing the identified echo characteristic with at least one stored value for the echo characteristic from previous connection between the local telephone and the remote telephone to determine whether there is a significant difference between the identified echo characteristic and the stored echo characteristic.

(Office Action ¶ 3, p. 4; emphasis added.)

between said local telephone and said remote telephone.” This is different from historical information for an echo between a predetermined place in the telephone line and the ANI for the calling phone. As those skilled in the art know, each telephone “connection” is different. Because applicant uses the echo characteristic for the specific telephone connection as the baseline, applicant’s device is both more accurate and more sensitive in detecting whether the telephone path has been altered by call-forwarding.

For the foregoing reasons and others, applicant respectfully submits that McNair is totally deficient as a primary reference. It does not address the problem specified in the claims. It does not disclose the technology to solve that problem as required in the claims. Simply stated McNair does not teach a method for addressing fraudulent call-forwarding or the means to do so.

The Office Action purports to address the deficiencies in McNair by adding the Pennypacker et al. reference. But Pennypacker fails to address either of the two glaring deficiencies of the principal reference.

First, Pennypacker fails to address detection of whether or not a destination telephone has been forwarded. Like McNair, the word “forward” does not even appear in the Pennypacker reference. Indeed, there is no assertion in the Office Action that the Pennypacker reference addresses the call-forwarding problem.

Second, while the Office Action asserts that the Pennypacker reference compares a system parameter to a previous system parameter stored for that purpose, there is no assertion that Pennypacker teaches the identification of an echo characteristic for a telephone communication and the comparison of an echo characteristic to at least one stored value for the echo characteristic from previous connection between said local telephone and said remote telephone.



Thus, Pennypacker does not plug the solve the huge deficiencies in the McNair reference.

Finally, the Office Action rejection of these claims is deficient because it fails to identify any motive for combining the references as required for a proper rejection under 35 U.S.C. Sec. 103. Since neither reference is directed to the detection of call-forwarding, the only apparent basis for combining them to address that problem is derived from hindsight.

For these reasons, applicant respectfully submits that the rejection of Claims 1, 2, 4, 6-9, 15 and 16 is improper and should be withdrawn.

D. Claims 3, 5, 11, 12, 13 and 14 are not Obvious under 35 U.S.C. Sec. 103:

Claims 3, 5, 11, 12, 13 and 14 are rejected as unpatentable under 35 U.S.C. Sec. 103 over McNair and Pennypacker as applied to Claim 1, further in view of U.S. Patent No. 5,577,116 ("Townsend"). (Office Action ¶ 4, pp. 6-8.)

Obviously, the core of this rejection is still the combination of McNair and Pennypacker, which is deficient for the reasons set forth previously. While the Townsend patent may have some relevance to the particulars of echo characteristics, it does not solve the deficiencies of the predicate references. Among other things, the Townsend Patent also does not mention the detection of a telephone that has been forwarded. Accordingly, it would be counterproductive to address the other deficiencies in the Townsend reference as applied to specific claims.

There are two aspects of the tripartite combination of references, however, which do warrant comment.

First, at several places in the rejection of these claims, the Office Action refers to "the combination of McNair and Pennypacker's fraud detection system." (See, e.g., Office Action ¶ 4,

p. 7; discussion of Claims 3 and Claims 5 and 11.) There is no such thing as a “McNair and Pennypacker fraud detection system.” The use of such “short cut” language should not be a substitute for an explanation of how one skilled in the art reading the three references would have been motivated to combine them as asserted by the Patent Office to solve a problem than none of them addresses. A proper rejection should set forth bases in the references themselves for the asserted combination. Again, it is apparent that the references have been combined only with the benefit of hindsight.

Finally, at several places deficiencies in the references are filled improperly with supposition on the part of the Patent Office. (See, e.g., Office Action ¶ 4, p. 8; discussion of Claims 13 and 14.) Such supposition, without supporting authority, is particularly suspect where none of the three references cited is even addressed to the problem solved by applicant’s invention. One skilled in the art would not find it obvious to make changes in the technology of McNair, Pennypacker and Townsend to refine the detection of call-forwarding, since none of them address call-forwarding at all.

Again, applicant respectfully submits that the subject matter of Claims 3, 5, 11, 12, 13 and 14 is not obvious in view of the three cited prior art references and respectfully requests that the rejection be withdrawn.

E. Claim 10 is not Obvious under 35 U.S.C. Sec. 103:

Claim 10 has been rejected as unpatentable under 35 U.S.C. Sec. 103 over McNair and Pennypacker as applied to Claim 1, further in view of U.S. Patent No. 5,859,907 (“Kawahara”). (Office Action ¶ 5, p. 9.)

Obviously, the core of this rejection is still the combination of McNair and Pennypacker, which is deficient for the reasons set forth previously. While the Kawahara patent may have some relevance to an "echo canceler," it does not solve the deficiencies of the primary references.

Among other things, the Kawahara Patent also does not mention the detection of a telephone that has been forwarded. Accordingly, it would be counterproductive to address the other deficiencies in the Kawahara reference as applied to specific claims.

For the reasons set forth previously, applicant submits that the rejection of Claim 10 is improper and should be withdrawn.

F. Information Disclosure Statement:

The Office Action indicates that other prior art has been made of record but not relied on. (Office Action, ¶ 6, pp. 9-10.) In that regard, applicant notes that the Office Action did not contain a separate listing of prior art. For convenience, applicant has submitted herewith a PTO Form 1449 listing the prior art cited in connection with applicant's parent application (now U.S. Patent No. 6,141,406). The references were previously cited by and known to the Examiner. The purpose of this submission is merely to ensure that these references are listed on the first page of any patent resulting from the present application.

IV. CONCLUSION

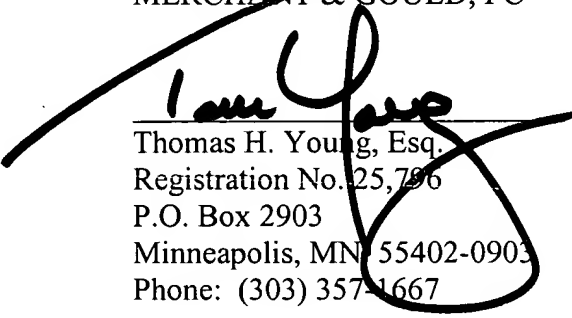
None of the prior art references cited in the Office Action address the problem of detecting a destination telephone that has been forwarded. The Office Action is clearly deficient in setting forth any bases in the references for combining them to achieve a result for a problem that none of

them addresses individually. Accordingly, applicant respectfully requests that the rejections be withdrawn and that all of the pending claims be allowed.

Submitted concurrently with this Response is a petition requesting a three-months' extension of time and a check in the amount of \$950 for the fee associated therewith. While applicant believes that this is the correct and only fee required by this Response, you are hereby authorized to charge any additional fees or to credit any overpayment in connection with these filings to Deposit Account No. 13-2725 with respect to Attorney Docket No. 40210.7USC1.

Respectfully submitted this 24<sup>th</sup> day of October 2003.

MERCHANT & GOULD, PC



Thomas H. Young, Esq.  
Registration No. 25,796  
P.O. Box 2903  
Minneapolis, MN 55402-0903  
Phone: (303) 357-1667

Attorneys for Applicant